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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,102	06/20/2003	Kenneth J. Balkus JR.	46847-00021USPT	7030

7590 05/16/2005

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EXAMINER

GRAY, JILL M

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,102

Applicant(s)

BALKUS ET AL.

Examiner

Jill M. Gray

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 10-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Restriction/Election

The restriction has been modified as follows:

Group I, claims 1-9 and 31-34.

Group II claims 10-30.

Applicant's election with traverse of Group I in the reply filed on 11/11/04 is acknowledged. The traversal is on the ground(s) that the inventions are not independent. This is not found persuasive because the search for Group I is not necessarily the same as the search for Group II. Accordingly a burden will be placed on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Response to Amendment

The rejection of claims 1-3, 5-8 and 31-33 under 35 U.S.C. 102(b) as being anticipated by Martin et al 4,878,908 and Martin 4, 127,706, is withdraw upon further consideration in view of applicant's arguments.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

Art Unit: 1774

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin, 4,127,706 or Martin et al, 4,043,331 (both referred to collectively as Martin, and both for reasons of record).

Martin teaches electrospun fibers and fibers network produced from a conducting solution comprising a precursor material and surfactant, per claims 1-3, 6-8, and 31-33. The precursor material comprises mesoporous material of the type contemplated by applicants in claims 4, 9 and 34. See '706 column 7, lines 6-10 and '331 column 8, lines 48-52. Also, the surfactant is of the type contemplated by applicant in claims 3, 8, 33 and the fibers have a diameter within applicant's range as set forth in claim 5. See '706, column 3, lines 26-27 and Example 11 and '331, see Example 1 and 3.

Therefore, the teachings of Martin '331 and '706 anticipated the invention as claimed in present claims 1-9 and 31-34.

Claims 1-3, 5-8 and 31-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Simpson et al US 2004/0037813 AI (Simpson) or Layman et al, US 2003/0215624AI (Layman) for reasons of record.

Claims 1, 4-6, 9, 31, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Senecal et al 6,800,155 B2 (Senecal).

Senecal teaches an electrospun fiber and a network of fibers (claims 1, 6, and 31) comprising at least one mesoporous precursor material of the type contemplated by applicants in claims 4, 9 and 34. See abstract and column 5, line 46 through column 6,

Art. Unit: 1774

line 2. In addition the fibers have a diameter within applicant's range as required by claim 5. See column 4, lines 50-51.

Therefore, the prior art teachings of Senecal anticipate the invention as claimed in present claims 1, 4-6, 9, 31 and 34.

Claims 1-3, 5-8 and 31-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Ignatious et al, US 2003/0017208 A1 (Ignatious).

Ignatious teaches electrospun fibers and network of fibers (per claims 1, 6, 31) comprising a fiber forming material and surfactant wherein the surfactant is of the type contemplated by applicants in claims 2-3, 7-8 and 32-33. The fiber forming material is selected from materials capable of being used to form molecular sieves, and more specifically, mesoporous materials. Note [0054], [0055 and [0058]. Also, the fiber diameter is within applicants' range as required by claim 5. See [0031].

Therefore the teachings of Ignatious anticipated the invention as claimed in present claims 1-3, 5-8 and 31-33.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 8 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 8 and 33 contain the trademark/trade name PLURONIC P-127, PLURONIC F-77, PLURONIC P-104, PLURONIC F-38, PLURONIC L-121,

Art Unit: 1774

TERGITOLS and TRITON -X. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe specific surfactants, and, accordingly, the identification/description is indefinite.

Response to Arguments

Applicant's arguments filed January 7, 2005 have been fully considered but they are not persuasive. Applicants argue that Martin '706 does not teach the use of mesoporous materials and that neither the term "mesoporous" nor "molecular sieve" are recited anywhere in the specification or claims of Martin 331 and '706.

Agreeably Martin does not specifically recite the term "mesoporous" or "molecular sieve" nonetheless, Martin specifically teaches the incorporation in his solution of at least one material, titanium dioxide, defined by applicants as being a mesoporous precursor material. Thus it is the position of the examiner that Martin does in fact teach a material of the same type contemplated by applicants or more specifically, a mesoporous precursor material.

Applicants argue that the low solubility and poor fiber forming properties of the polymers used in Martin '331 and '706 required a polymer additive to solubilize and promote fiber formation whereas the use of a surfactant in the claimed invention is not a solubilizing agent but rather as a template.

In this regard the prior art teaches the same process steps as those claimed by applicants. Furthermore it is the examiner's position that the fact that applicant uses the surfactant for a different purpose does not alter the conclusion that its use in a prior art electrospinning process would be prima facie obvious from the purpose disclosed in the references.

Applicants argue that Martin '331 teaches the inclusion of a wettable additive to the polymer, specifically metal oxides and hydroxides, further arguing that these metals would not work in the claimed invention since the claimed invention requires a soluble gel form of the metal.

In this regard, applicants' claims 1, 4, 6, 9, 31 and 34 do not require a soluble gel form of the metals; all that these claims require is a mesoporous precursor material. The metal oxides and hydroxide necessarily are precursor materials.

Applicants argue that neither Simpson nor Layman recite methods for or compositions resulting from the electrospinning of mesoporous precursor materials an element of the claimed invention and the absence of the recitation of this claimed element in any of the cited references indicates that the examiner has failed to show that the prior art anticipates the claimed invention.

Art Unit: 1774

True neither Simpson nor Layman specifically recite electrospinning of "mesoporous materials". Nevertheless, as set forth previously, Simpson and Layman each incorporate in their solution at least one material defined by applicants as being a mesoporous precursor material. Moreover the claims do not require the presence of a mesoporous material per se, rather the presence of at least one mesoporous precursor material.

Applicants argue that the claimed invention does not use any additives or processing aids and the surfactant is used as a template to introduce uniform pore structure and is not used to solubilize the material being electrospun, aid in fiber formation or affect the molecular sieve fiber properties.

Again, as set forth previously, the fact that applicant uses the surfactant for a different purpose does not alter the conclusion that its use in a prior art electrospinning process would be prima facie obvious from the purpose disclosed in the references.

No claims are allowed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

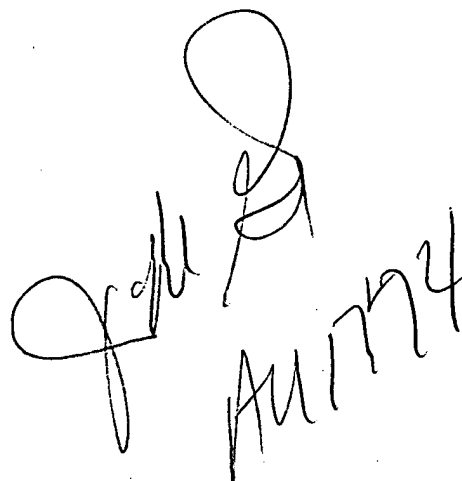
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is (571) 272-1524. The examiner can normally be reached on Monday-Thursday from 10:30 to 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1774

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J. Gray/af
April 19, 2005

A handwritten signature, possibly "John S. Gray", is written in cursive. Below the signature, the date "April 19, 2005" is written in a similar cursive style.